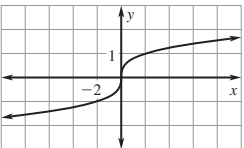
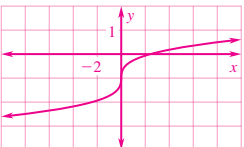


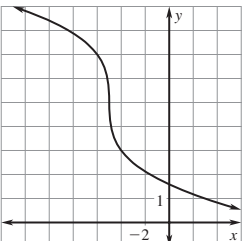
15.  domain: all real numbers, range: all real numbers

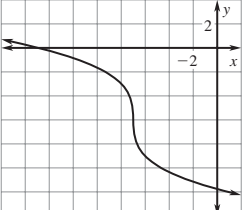
16.  domain: $x \geq 1$, range: $y \geq 3$

17.  domain: $x \geq -1$, range: $y \geq 8$

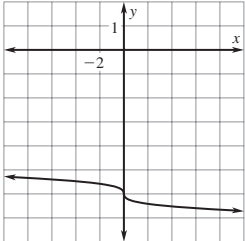
18.  domain: $x \geq 5$, range: $y \leq 1$

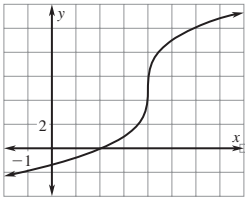
19.  domain: all real numbers, range: all real numbers

20.  domain: all real numbers, range: all real numbers

21.  domain: all real numbers, range: all real numbers

22.  domain: $x \geq 4$, range: $y \leq -7$

23.  domain: all real numbers, range: all real numbers

24.  domain: all real numbers, range: all real numbers

28. Domain: $x \geq -5$, range: $y \geq 0$; the expression under the radical sign must be greater than or equal to 0, so substitute the least value of x into the equation and find y .

29. Domain: $x \geq 12$, range: $y \geq 0$; the expression under the radical sign must be greater than or equal to 0, so substitute the least value of x into the equation and find y .

30. Domain: $x \geq 0$, range: $y \geq -4$; the expression under the radical sign must be greater than or equal to 0, so substitute the least value of x into the equation and find y .

31. Domain: all real numbers, range: all real numbers; there are no restrictions on finding the cube root of a number and therefore no restrictions on the range.

32. Domain: all real numbers, range: all real numbers; there are no restrictions on finding the cube root of a number and therefore no restrictions on the range.

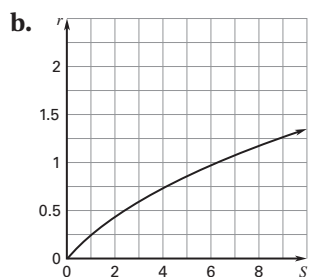
33. Domain: $x \geq 3$, range: $y \geq 6$; the expression under the radical sign must be greater than or equal to 0, so substitute the least value of x into the equation and find y .

6.5 Problem Solving (pp. 450–451)

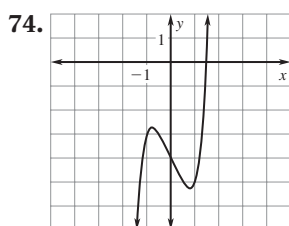
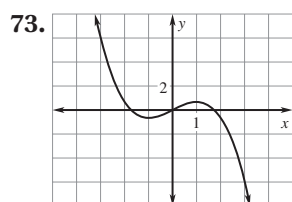
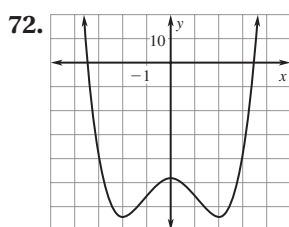
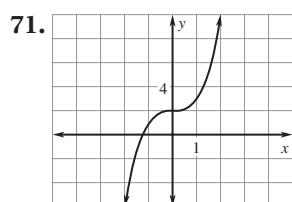
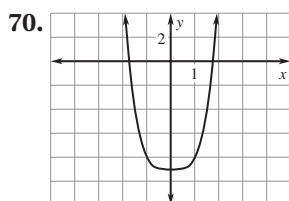
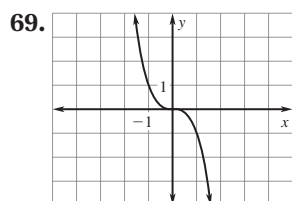
40. a. $S = \pi r^2 + \pi r$, $\frac{S}{\pi} = r^2 + r$, $\frac{S}{\pi} + \frac{1}{4} = r^2 + r + \frac{1}{4}$,

$$\frac{S}{\pi} + \frac{1}{4} = \left(r + \frac{1}{2}\right)^2, \sqrt{\frac{S}{\pi} + \frac{1}{4}} = r + \frac{1}{2}, \sqrt{\frac{4S + \pi}{4\pi}} = r + \frac{1}{2},$$

$$\frac{1}{\sqrt{\pi}} \sqrt{4S + \pi} = r + \frac{1}{2}, \frac{1}{\sqrt{\pi}} \sqrt{4S + \pi} - \frac{1}{2} = r$$

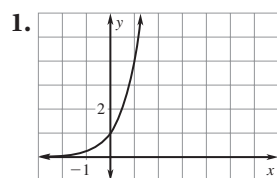


6.6 Mixed Review (p. 459)

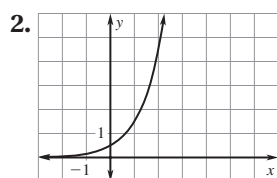


Chapter 7

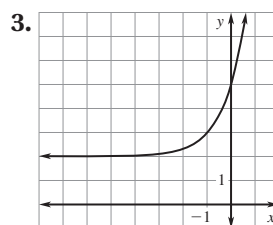
7.1 Guided Practice (pp. 479–481)



domain: all real numbers,
range: $y \geq 0$

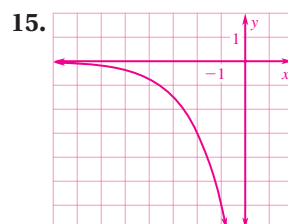


domain: all real numbers,
range: $y \geq 0$

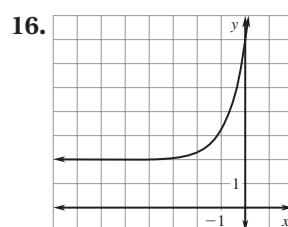


domain: all real numbers,
range: $y \geq 2$

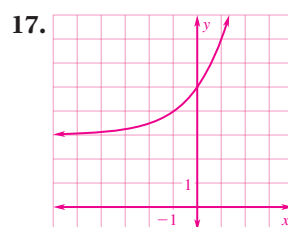
7.1 Skill Practice (pp. 482–483)



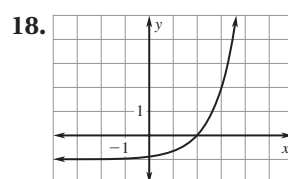
domain: all real numbers,
range: $y < 0$



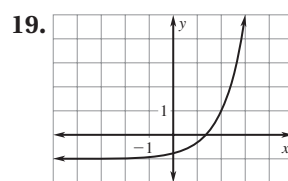
domain: all real numbers,
range: $y > 2$



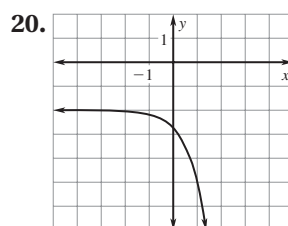
domain: all real numbers,
range: $y > 3$



domain: all real numbers,
range: $y > -1$



domain: all real numbers,
range: $y > -1$



domain: all real numbers,
range: $y < -2$